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OFFICE OF CHIEF ENGINEER & ADDITIONAL SECRETARY PWD RAJASTHAN, JAIPUR

No. F. (184) SE (Be/SS) Circulars/D-208 Date: 04-06-13

CIRCULAR

**Sub:-Adoption of green building measures in new buildings under construction.**

In the above cited subject it is worthwhile here to mention that demand of electricity and water is increasing exponentially especially in building sector. Our natural resources are depleting day by day and a huge gap between demand and supply has been created. It has become the need of the hour to conserve our natural resources. Since public works department is responsible for construction of government residential and non residential buildings, it is essential to adopt green building measures by architects, civil and electrical engineers and hence pave the way to sustainable development.

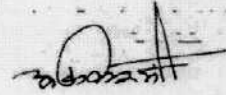
It is enjoined upon the departmental architects to design building having least requirement of artificial lighting and orient them to minimize entrance of solar heat inside. Design of openings and shading of windows etc is to be given special attention to make the building green. Wall thickness in south-west side be taken to increase thermal resistance and landscaping/fountain/ponds be included in a direction to pre-cool the air entering the building. Double glazed glass windows of superior quality be suggested as per requirement of the buildings.

Responsibility of civil engineers in this field starts right from the beginning while planning and estimation. Civil engineers are supposed to assist in selection of site keeping in view availability of natural resources like water, material in construction should be taken which requires least transportation; trees and greenery must be saved as far as possible. Harm to local ecosystem should be minimized. Wastage shall be kept to a minimum and must be re-used. Provision in the building estimate for energy efficient fixtures must be taken in consultation with electrical engineers.

Recycle of waste water for gardening etc be designed and it is a must to provide water harvesting structures and plantation in new buildings.

As per present scenario, role of electrical engineers to make the building green is very important. Energy efficient CFL/LED fixtures star rated fans, air-conditioners, refrigerators, pumps and transformers shall be taken in the estimate. High COP chillers, primary and secondary pumping for central air conditioning, VFD in AHU should be selected and VRV system for air-conditioning should be preferred. Provision for solar water heating system and solar lights for campus lighting, solar electric panels and Earth Air Tunnel (EAT) cooling system shall be essentially incorporated in forecast estimates for new buildings proposed for construction in future.

It is hereby directed all concerned to adopt green building measures in buildings to be constructed by the department and follow Energy Conservation Building Directives-2011 issued by state government.



Chief Engineer & Addl. Secretary  
PWD, Rajasthan, Jaipur

No. F. (184) SE (Roads) / Circular / D-208 Date: 04-06-13  
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Chief Engineer & Addl. Secretary  
PWD, Rajasthan, Jaipur